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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,340	07/10/2001	Lih-Hsin Chou	CU-2592 RJS	8900

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EXAMINER
ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
1756	3

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/902,340	CHOU ET AL.	
	Examiner	Art Unit	
	Martin J Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4,6-9 are rejected under 35 U.S.C. 102(b) as being fully anticipated by JP 04-069834.

See the example cited in the abstract. The claim, that the layer is a recording film is considered intended use. The examiner notes that the claims reciting methods like steps, are considered properly product by process claims and the applicant bears the responsibility of showing that the process materially affects the resultant article (see MPEP 2113).

4. Claims 1-6,8-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Bosch WO 83/02254 or Bosch, M.A., "Optical recording in hydrogenated semiconductors", Appl. Phys. Lett., Vol 40(1) pp. 8-10 (01/1982), in view of Brady et al. '507.

Bosch WO 83/02254 teaches the formation of Si with 4-50% hydrogen or Ge with 4-50% hydrogen coated on a glass substrate and that heating with a laser results in evolution of hydrogen gas. (2/22-3/17). The use of layers 5000 angstroms (500 nm) is disclosed. (3/29-4/21).

Bosch, M.A., "Optical recording in hydrogenated semiconductors", Appl. Phys. Lett., Vol 40(1) pp. 8-10 (01/1982) teaches the formation of 0.5 micron Si films with 25% hydrogen or

0.5 micron Ge films with 25% hydrogen coated on a glass substrate and that heating with a laser results in evolution of hydrogen gas. (pages 8-10).

Brady et al. '507 describes a substrate (48), which may be glass, plastic, ceramic or the like, a metal film (64), an adhesion layer (66) and a layer of amorphous material (68), selected from diamond like carbon, silicon carbide, boron carbide, boron nitride, silicon, germanium or hydrogenated forms of these. The hydrogen content can be up to 50 atomic %. (7/40-8/5). The amorphous layer may be 4-1000 nm. (5/58-60).

It would have been obvious to one skilled in the art to modify the article of either Bosch WO 83/02254 or Bosch, M.A., "Optical recording in hydrogenated semiconductors", Appl. Phys. Lett., Vol 40(1) pp. 8-10 (01/1982) to use plastic substrates based upon the disclosure of equivalence by Brady et al. '507. Further, it would have been obvious to use the metal film (64) to reflect the optical energy as disclosed in Brady et al. '507 or to use other amorphous materials with hydrogen based upon the disclosed of equivalence by Brady et al. '507.

5. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Bosch WO 83/02254 or Bosch, M.A., "Optical recording in hydrogenated semiconductors", Appl. Phys. Lett., Vol 40(1) pp. 8-10 (01/1982), in view of Brady et al. '507 and Ohkawa et al. '635.

Ohkawa et al. '635 teach pit forming media using hydrogenated films as the recording layer. The use of various substrate materials, including glass, polycarbonate, polymethyl methacrylate (an acrylic resin), polyolefin, or epoxy resins. (3/11-21)

In addition to the basis provided above, the examiner holds that it would have been obvious to use old and well known polymeric substrates, such as the polycarbonate, polymethyl methacrylate (an acrylic resin), polyolefin, or epoxy resins disclosed by Ohkawa et al. '635 as the

plastic substrate materials in the optical recording media resulting from the combination of either Bosch WO 83/02254 or Bosch, M.A., "Optical recording in hydrogenated semiconductors", Appl. Phys. Lett., Vol 40(1) pp. 8-10 (01/1982) and Brady et al. '507.

6. Claims 1-6,8-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takakubo et al. JP 01-169749.

Takakubo et al. JP 01-169749 teaches amorphous carbon hydrogen films as the recording layer using plasma CVD. The thickness may be 300-900 nm (page 2/upper right column) and may be formed on glass of inexpensive organic resin substrates ((page 2, lower left column).

It would have been obvious to one skilled in the art to form the recording layer of Takakubo et al. JP 01-169749 within the 300-600 nm thickness range on an inexpensive organic resin substrate based upon the disclosed to do so.

7. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takakubo et al. JP 01-169749, in view of Ohkawa et al. '635

In addition to the basis provided above, the examiner holds that it would have been obvious to use old and well known polymeric substrates, such as the polycarbonate, polymethyl methacrylate (an acrylic resin), polyolefin, or epoxy resins disclosed by Ohkawa et al. '635 as the plastic substrate materials in the optical recording media of Takakubo et al. JP 01-169749.

8. Claims 1-4,6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuo et al. '349.

Tsuo et al. '349 teach the use of various substrates including plastic materials. (4/18-20). The formation of amorphous Si:H, (example 1), a-SiC:H (example 2) on glass substrates is disclosed.

It would have been obvious to one skilled in the art to form the recording layer of Tsuo et al. '349 within the 300-600 nm thickness range on an inexpensive organic resin substrate based upon the disclosed to do so.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brodsky '844 teaches amorphous Si, Ge or SiC on various substrates including polymeric substrates (3/16-28).

10 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebranndt whose telephone number is 703-308-4397. The examiner can normally be reached on Mondays-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Martin J Angebranndt
Primary Examiner
Art Unit 1756

May 1, 2003